

This listing of claims will replace all prior versions and listings of the claims in the application:

Listing of Claims:

1-40. (Cancelled)

41. (Previously presented) An integrated filtration and detection device for collecting and detecting the growth of microorganisms in a specimen, said device comprising:

a) a container including a side wall and a fixed end wall defining a chamber therein and having an inlet and an outlet in fluid communication with said chamber, wherein said end wall defines a continuous closed surface that is continuous with said side wall and free of openings;

b) a filter for filtering fluids, said filter mounted in said chamber between said inlet and said outlet; and

c) a sensor mounted in said chamber parallel to and against said end wall of said chamber, said sensor operative to exhibit a change in a measurable property thereof upon exposure to changes in said chamber due to microbial growth;

wherein said container has a transparent section and changes in said measurable property of said sensor are detectable through said transparent section; and said sensor and said filter are disposed at opposed ends of said chamber.

42. (Previously presented) The device of Claim 41 wherein said container is unitary and said inlet and said outlet are the only openings into said container communicating with said chamber.

43. (Previously presented) The device of Claim 42 wherein:

said device has an operative testing orientation and, when said device is in said operative testing orientation, said sensor resides at a lower end of said chamber and below said filter; and

wherein, when said device is in said operative testing orientation, said inlet and said outlet are each located above said sensor.

44. (Previously presented) The device of Claim 41 wherein said device has an operative testing orientation and, when said device is in said operative testing orientation, said sensor resides at a lower end of said chamber and below said filter.

45. (Previously presented) An integrated filtration and detection product for collecting and detecting the growth of microorganisms in a specimen, said product comprising:
a container defining a chamber therein and having an inlet and an outlet in fluid communication with said chamber;
a liquid culturing medium disposed in said chamber;
a filter for filtering fluids, said filter mounted in said chamber between said inlet and said outlet; and
a sensor mounted in said chamber parallel to and against an end wall of said chamber, said sensor operative to exhibit a change in a measurable property thereof upon exposure to changes in said chamber due to microbial growth;
wherein said container has a transparent section and changes in said measurable property of said sensor are detectable through said transparent section; and said sensor and said filter are disposed at opposed ends of said chamber;
wherein said sensor resides at a lower end of said chamber and below said filter;
and

wherein said liquid culturing medium is disposed in said lower end of said chamber and contacts said sensor in said lower end of said chamber.

46. (Previously presented) The device of Claim 45 wherein:
said container includes a side wall defining the chamber;
said end wall is fixed and defines a continuous closed surface that is continuous with the side wall and free of openings; and
said inlet and said outlet are each located above said sensor.
47. (Previously presented) The device of Claim 45 wherein said chamber is fully sealed.
48. (New) The device of Claim 41 wherein said filter is a microporous filter.
49. (New) The device of Claim 41 wherein said filter is a radial flow filter.
50. (New) The device of Claim 41 wherein said sensor is responsive to at least one of a change in pH and the presence of CO₂.
51. (New) The device of Claim 41 wherein said sensor is operative to change color in response to at least one of a change in pH and the presence of CO₂ in said chamber.
52. (New) The device of Claim 51 wherein changes in the color of said sensor are detectable through said transparent section.
53. (New) The device of Claim 41 wherein said sensor is bonded to said interior surface of said container.

54. (New) The device of Claim 41 wherein said container is formed of a plastic.
55. (New) The device of Claim 41 wherein said container includes:
a container body having an end opening opposite said end wall on which said sensor is mounted; and
an end cap secured over and sealing said end opening;
wherein said inlet and said outlet are formed in said end cap.
56. (New) The device of Claim 55 including an O-ring seal between said container body and said end cap.
57. (New) The device of Claim 45 wherein said device has an operative testing orientation and, when said device is in said operative testing orientation, said sensor resides at a lower end of said chamber and below said filter.
58. (New) The device of Claim 45 wherein said filter is a microporous filter.
59. (New) The device of Claim 45 wherein said filter is a radial flow filter.
60. (New) The device of Claim 45 wherein said sensor is responsive to at least one of a change in pH and the presence of CO₂.
61. (New) The device of Claim 45 wherein said sensor is operative to change color in response to at least one of a change in pH and the presence of CO₂ in said chamber.
62. (New) The device of Claim 61 wherein changes in the color of said sensor are detectable through said transparent section.

63. (New) The device of Claim 45 wherein said sensor is bonded to said interior surface of said container.

64. (New) The device of Claim 45 wherein said container is formed of a plastic.

65. (New) The device of Claim 45 wherein said container includes:
a container body having an end opening opposite said end wall on which said sensor is mounted; and
an end cap secured over and sealing said end opening;
wherein said inlet and said outlet are formed in said end cap.

66. (New) A system for detecting the growth of specimen in a specimen, said system comprising:

- a) an integrated filtration and detection device comprising:
 - a container including a side wall and a fixed end wall defining a chamber therein and having an inlet and an outlet in fluid communication with said chamber, wherein said end wall defines a continuous closed surface that is continuous with said side wall and free of openings;
 - a filter for filtering fluids, said filter mounted in said chamber between said inlet and said outlet; and
 - a sensor mounted in said chamber parallel to and against said end wall of said chamber, said sensor operative to exhibit a change in a measurable property thereof upon exposure to changes in said chamber due to microbial growth;
 - wherein said container has a transparent section and changes in said measurable property of said sensor are detectable through said transparent section; and
 - said sensor and said filter are disposed at opposed ends of said chamber; and

b) a measuring apparatus operable to detect the measurable property of said sensor through said transparent section.

67. (New) A system for detecting the growth of specimen in a specimen, said system comprising:

a) an integrated filtration and detection device comprising:

a container defining a chamber therein and having an inlet and an outlet in fluid communication with said chamber;

a liquid culturing medium disposed in said chamber;

a filter for filtering fluids, said filter mounted in said chamber between said inlet and said outlet; and

a sensor mounted in said chamber parallel to and against an end wall of said chamber, said sensor operative to exhibit a change in a measurable property thereof upon exposure to changes in said chamber due to microbial growth;

wherein said container has a transparent section and changes in said measurable property of said sensor are detectable through said transparent section; and said sensor and said filter are disposed at opposed ends of said chamber;

wherein said sensor resides at a lower end of said chamber and below said filter; and

wherein said liquid culturing medium is disposed in said lower end of said chamber and contacts said sensor in said lower end of said chamber; and

b) a measuring apparatus operable to detect the measurable property of said sensor through said transparent section.